



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,237	08/20/2003	Satoko Iwato	CH2894USNA	6051

23906 7590 05/30/2006

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
----------	--------------

1751

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,237

Applicant(s)

IWATO ET AL.

Examiner

Preeti Kumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Final Rejection

1. Claims 1-17 are pending. Claims 1 and 13 are independent.

Response to Amendment

2. The rejection of claims 1 and 13 under 35 U.S.C. 112, second paragraph, is withdrawn.
3. The rejection of claims 1, 2, 5-8, 13-15 under 35 U.S.C. 102(b) as being anticipated by Halling (US 5,442,011) is maintained.
4. The rejection of claims 3-4, 9-12, and 16-17 under 35 U.S.C. 103(a) as being obvious over Halling (US 5,442,011) is maintained.
5. The rejection of claims 1-8, 13-15 under 35 U.S.C. 102(b) as being anticipated by Halling (US 5,550,184) is maintained.
6. The rejection of claims 9-12, and 16-17 under 35 U.S.C. 103(a) as being obvious over Halling (US 5,442,011) is maintained.
7. The rejection of claims 1, 2, 5-8, 13-15 under 35 U.S.C. 102(b) as being anticipated by Halling (WO 95/23804) is maintained.
8. The rejection of claims 3-4, 9-12, and 16-17 under 35 U.S.C. 103(a) as being obvious over Halling (WO 95/23804) is maintained.

Response to Arguments

9. Applicant's arguments filed 3/21/2006 have been fully considered but they are not persuasive.

Applicants urge that Halling does not teach the use of a catalyst.

Contrary to applicants arguments, Halling teach the use of catalyst in the preparation of the fluorocarbon silane emulsions.

See example 2 of Halling (US 5,442,011) where the prior art teaches the utility of sodium methoxide catalyst in the preparation of the fluorocarbon silane emulsion.

See col.4,ln.34-36, of Halling (US 5,550,184) where the prior art teaches that it is useful for the preparation of the fluorocarbon silane emulsions to remove the methanol or ethanol by-products by the utility of an acid or base catalyst, such as p-toluenesulfonic acid or sodium methoxide, to accelerate the reaction.

See page 5,ln.36 to page 6 line2, of Halling (WO 95/23804) for the analogous teaching of the catalyst.

Applicants urge that dependent claims 3-4, 9-12 and 16-17, are dependent on claim 1 or 13 and claims 1 and 13 have not received an obviousness rejection. Applicants further state that if the independent claim has not received an obviousness rejection then it is not possible for any dependent claim to be obvious.

In response to applicants argument, independent claims 1 and 13 have been rejected under 102(b) as being anticipated by the Halling references (US 5,442,011), (US 5,550,184), (WO 95/23804). The limitations to the thickness of the coating and coating the claimed p-phenylene terephthalamide, firefighting apparel and a glove as recited by claims 3-4, 9-12 and 16-17 are not taught with sufficient specificity to constitute anticipation, however, said limitations are obvious over the Halling references (US 5,442,011), (US 5,550,184), (WO 95/23804) and accordingly a proper obviousness rejection was made in light of the same Halling references (US 5,442,011), (US

Art Unit: 1751

5,550,184), (WO 95/23804) which anticipated the material limitations of independent claims 1 and 13.

Claim Rejections

10. Claims 1, 2, 5-8, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halling (US 5,442,011).

Halling teaches polymeric fluorocarbon siloxanes represented by the formula claimed in instant claim 1 (see col.4,ln.30-65) wherein the perfluoroalkyl alkoxy silane is in a stable aqueous emulsion and is used to produce a durable coating for providing water repellency. See abstract, ex. 1-4. Halling teaches the use of catalyst in the preparation of the fluorocarbon silane emulsions. See example 2 where Halling teaches the utility of sodium methoxide catalyst in the preparation of the fluorocarbon silane emulsion.

Regarding the fibers of claims 5-8, 12-15, Halling teaches treating various substrates having siliceous, cellulosic or proteinaceous surfaces and to polymer substrates, such as polyesters and polyamides for water repellency. See col.7,ln.20-50.

Accordingly the teachings of Halling anticipate the material limitations of the instant claims.

11. Claims 3-4, 9-12, and 16-17 are rejected under 35 U.S.C. 103(a) as being obvious over Halling (US 5,442,011).

Halling is relied upon as set forth above. However, Halling does not teach a film having a thickness of less than 1000nm as recited by claim 3-4 and does not teach

Art Unit: 1751

coating the claimed p-phenylene terephthalamide, firefighting apparel and a glove as recited by claims 9-12 and 16-17.

It would have been obvious to one of ordinary skill in the art to arrive at a film having a thickness of less than 1000nm as recited by the instant claims 3-4, with a reasonable expectation of success and similar results because Halling teaches a coating composition produced from the same fluorocarbon silane emulsion which would be expected to have similar physical properties.

Also, it would have been obvious to one of ordinary skill in the art to arrive at a composition to coat p-phenylene terephthalamide, firefighting apparel and a glove as recited by the instant claims 9-12 and 16-17, because Halling teaches coating polyester and polyamide fibers in general.

12. Claims 1-8, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halling (US 5,550,184).

Halling teaches polymeric fluorocarbon siloxanes represented by the formula claimed in instant claim 1 (see col.3,ln.45-55) wherein the perfluoroalkyl alkoxysilane is in a stable aqueous emulsion and is used to produce a durable coating for providing water repellency. See abstract, ex. 1-4 and claims 1-5.

Halling teach the use of catalyst in the preparation of the fluorocarbon silane emulsions. See col.4,ln.34-36, where Halling teaches that it is useful for the preparation of the fluorocarbon silane emulsions to remove the methanol or ethanol by-products by the utility of an acid or base catalyst, such as p-toluenesulfonic acid or sodium methoxide, to accelerate the reaction.

Regarding the thickness of claims 3-4, Halling teaches that the emulsion has a particle size of 10nm to 100nm. See col.6,ln.1-7.

Regarding the fibers of claims 5-8, 12-15, Halling teaches treating various substrates having siliceous, cellulosic or proteinaceous surfaces and to polymer substrates, such as polyesters and polyamides for water repellency. See col.6,ln.35-45.

Accordingly the teachings of Halling anticipate the material limitations of the instant claims.

13. Claims 9-12, and 16-17 are rejected under 35 U.S.C. 103(a) as being obvious over Halling (US 5,442,011).

Halling is relied upon as set forth above. However, Halling does not teach coating the claimed p-phenylene terephthalamide, firefighting apparel and a glove as recited by claims 9-12 and 16-17.

It would have been obvious to one of ordinary skill in the art to arrive at a composition to coat p-phenylene terephthalamide, firefighting apparel and a glove as recited by the instant claims 9-12 and 16-17, because Halling teaches coating polyester and polyamide fibers in general.

14. Claims 1, 2, 5-8, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halling (WO 95/23804).

Halling teaches polymeric fluorocarbon siloxanes represented by the formula claimed in instant claim1 (see page 4) wherein the perfluoroalkyl alkoxysilane is in a stable aqueous emulsion and is used to produce a durable coating for providing water repellency. See abstract, ex. 1,6,and 10.

Halling teach the use of catalyst in the preparation of the fluorocarbon silane emulsions. See page 5,ln.36 to page 6 line2, where Halling teaches that it is useful for the preparation of the fluorocarbon silane emulsions to remove the methanol or ethanol by-products by the utility of an acid or base catalyst, such as p-toluenesulfonic acid or sodium methoxide, to accelerate the reaction.

Regarding the fibers of claims 5-8, 12-15, Halling teaches treating various substrates having siliceous, cellulosic or proteinaceous surfaces and to polymer substrates, such as polyesters and polyamides for water repellency. See page 8-9. Accordingly the teachings of Halling anticipate the material limitations of the instant claims.

15. Claims 3-4, 9-12, and 16-17 are rejected under 35 U.S.C. 103(a) as being obvious over Halling (WO 95/23804).

Halling is relied upon as set forth above. However, Halling does not teach a film having a thickness of less than 1000nm as recited by claim 3-4 and does not teach coating the claimed p-phenylene terephthalamide, firefighting apparel and a glove as recited by claims 9-12 and 16-17.

It would have been obvious to one of ordinary skill in the art to arrive at a film having a thickness of less than 1000nm as recited by the instant claims 3-4, with a reasonable expectation of success and similar results because Halling teaches a coating composition produced from the same fluorocarbon silane emulsion which would be expected to have similar physical properties.

It would have been obvious to one of ordinary skill in the art to arrive at a composition to coat p-phenylene terephthalamide, firefighting apparel and a glove as recited by the instant claims 9-12 and 16-17, because Halling teaches coating polyester and polyamide fibers in general.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Mc Ginty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Preeti Kumar *PK*
Examiner
Art Unit 1751

PK

Brian P. Mruk
BRIAN P. MRUK
PRIMARY EXAMINER
TECH CENTER 1700